Operating Instructions

SX-P420 is designed for sale in U.K.

STEREO RECEIVER

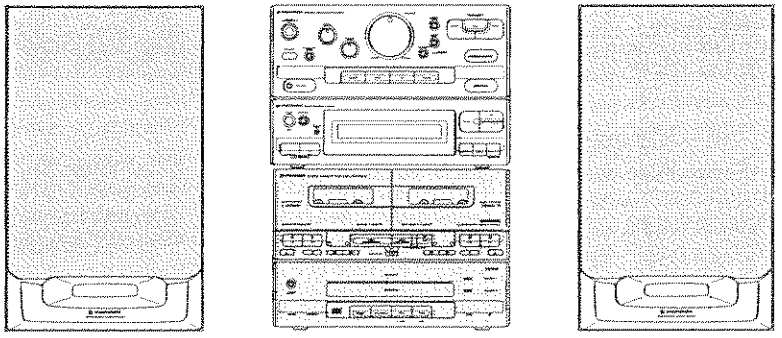
SX-P420
SX-P520

SPEAKER SYSTEM

S-P520 (for U.K. model)

S-P520A (for U.S. and Canadian models)

S-P520D (Except for U.K., U.S. and Canadian models)



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure place. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

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MAINTENANCE

Maintenance of external surfaces

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water and wrung out well, then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

CAUTIONS REGARDING HANDLING

Location

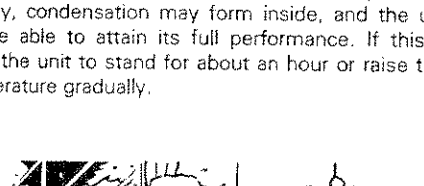
Install the unit in a well-ventilated location where it will not be exposed to high temperature or humidity.
Do not install the unit in a location which is exposed to direct rays of the sun, or near stoves or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the unit in a damp or dusty environment may also result in malfunction or accident. (Avoid installation near cookers, etc., where the unit may be exposed to smoke from oil, steam or heat.)

Precautions regarding installation

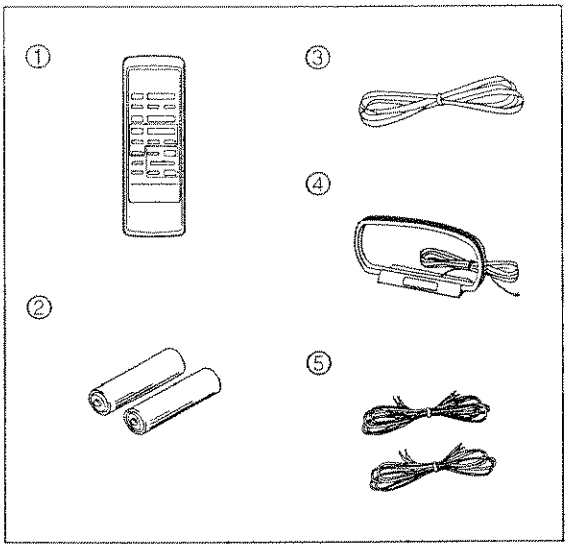
- Placing and using the unit for long periods on heat-generating sources will affect performance. Avoid placing the unit on heat-generating sources.
- Install the unit as far away as possible from your TV. Installation in close proximity to such equipment may cause noise or degradation of the picture.
- Such noise may be particularly noticeable when an indoor antenna is used. In such cases, make use of an outdoor antenna, or turn off the power to the unit.
- Please place this unit on a level surface.

Condensation

When this unit is brought into a warm room from previously cold surroundings or when the room temperature rises sharply, condensation may form inside, and the unit may not be able to attain its full performance. If this occurs, allow the unit to stand for about an hour or raise the room temperature gradually.

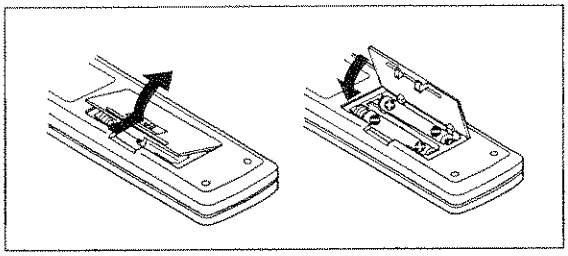


CONFIRM SUPPLIED ACCESSORIES



① Remote control unit X 1
② AAA/R03 dry cell batteries X 2
③ FM T-type antenna X 1
④ AM loop antenna X 1
⑤ Speaker cords X 2 (Except for U.K. model)

PUT BATTERIES INTO THE REMOTE CONTROL UNIT

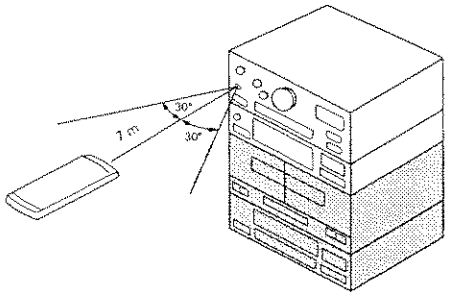


Open the battery compartment cover on the back of the remote control unit.
Insert size "AAA" (IEC R03/UM-4) dry cell batteries into the battery compartment in accordance with the indications (⊕, ⊖) inside the compartment.
Close the cover of the battery case.

Incorrect use of batteries may cause leakage or rupture. Always be sure to follow these guidelines:
A. Always insert batteries into the battery compartment correctly matching the positive + and negative – polarities, as shown by the display inside the compartment.
B. Never mix new and used batteries.
C. Batteries of the same size may have different voltages, depending on brand. Do not mix different brands of batteries.

REMOTE CONTROL OPERATIONS

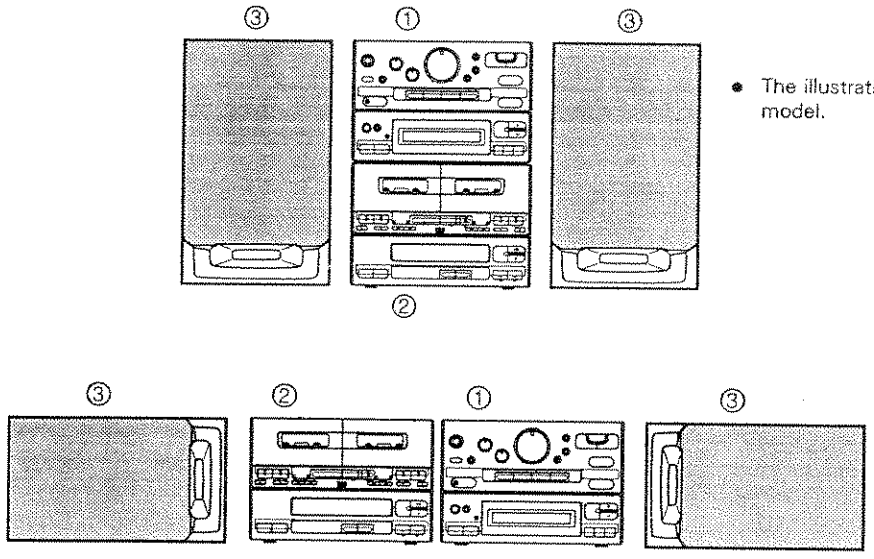
When operating the remote control unit, point the unit's infrared signal transmitter at the remote sensor window on the front panel of the receiver. The remote control unit can be used within a range of about 7 meters (23 feet) from the remote sensor, and within angles of up to about 30 degrees.



NOTES:

- *If there is any obstacle between the remote control unit and the remote sensor window, or if the unit is held at too large an angle relative to the remote sensor window, the signal from the remote control unit will fail to reach the remote sensor.*
- *If the unit is operating in the vicinity of other appliances generating infrared rays, or if other remote control devices using infrared rays are used near the unit, the unit may operate improperly. Conversely, if the receiver's remote control unit is operated in the vicinity of another appliance which uses an infrared remote control device, the other appliance may operate improperly. If this should happen, change the place of installation so that improper operation does not occur.*
- *If the range of operation of the remote control unit becomes too short, replace the batteries.*
- *When the unit is not to be used for a long period of time (more than one month), remove the batteries to prevent them from leaking inside the compartment. If leakage occurs, wipe up the liquid inside the compartment and replace the batteries with new ones.*
- *Do not place books or other objects on the remote control unit, since they might depress the buttons and run down the batteries.*
- *If the remote control sensor window is in a position where it receives strong light such as sunlight or fluorescent light, control may not be possible.*

SETTING UP THE SYSTEM



- The illustration shows U.K. model.

Install this system as shown in the accompanying illustration only.

① Stereo receiver (SX-P420, SX-P520)
② Cassette deck CD player (PDC-P420)
Cassette deck twin CD player (PDC-P520T)
Cassette deck multi-CD player (PDC-P520M)
③ Speaker system

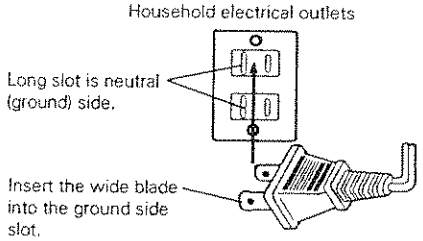
- Leave a minimum of 1 cm (3/8 in.) of vertical clearance between each of the components.

NOTE:

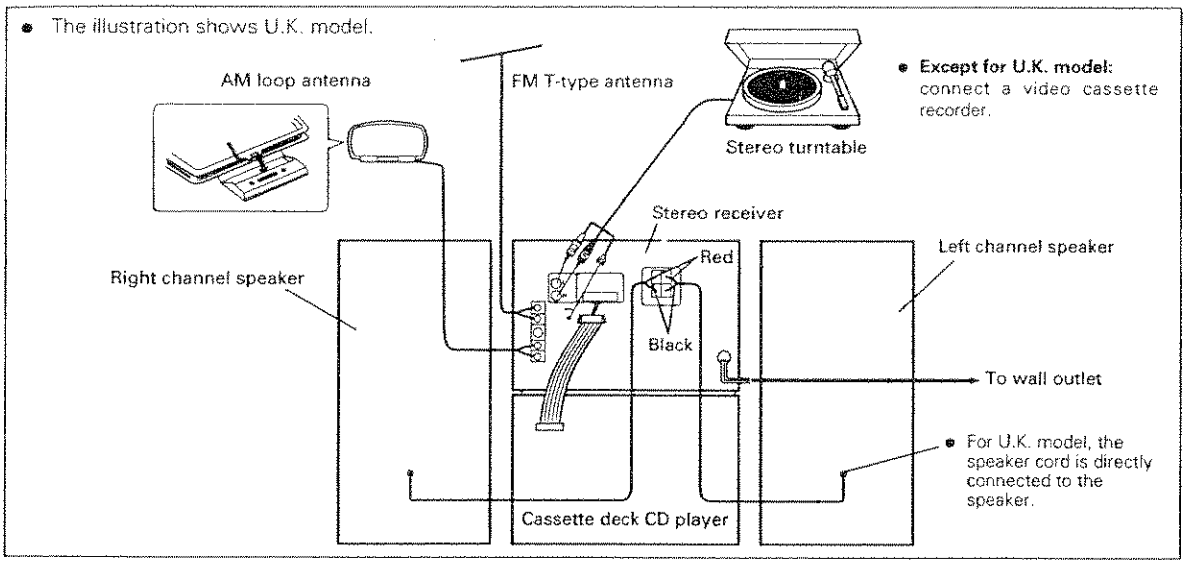
- *Place the speakers so that they are not touching any other components. If they are touching, vibrations transmitted from the speakers to other components may adversely affect sound quality. Preventing radiation of heat from the amplifier may also cause malfunction.*
- *If the turntable is mounted directly on or against a speaker, the vibration from the speaker will be transported to the tonearm's cartridge, thus causing feedback howling. Be sure that speakers are mounted sufficiently isolated from the turntable.*
- *This system is equipped with a safety circuit which may operate in event of abnormality to automatically cut off the power.*

CONNECTING THE POWER CORD
(For U.S. and Canadian models)

Household electrical outlets are provided with specific polarity, a live side and a neutral (ground) side. This unit utilizes such polarity in order to improve sound quality. As shown in the illustration, be sure to insert the power plug so that its blades match the width of slots in the outlet.



CONNECTIONS


• The illustration shows U.K. model.
AM loop antenna
FM T-type antenna
Stereo turntable
• Except for U.K. model: connect a video cassette recorder.
Stereo receiver
Red
Black
Left channel speaker
Right channel speaker
To wall outlet
• For U.K. model, the speaker cord is directly connected to the speaker.
Cassette deck CD player

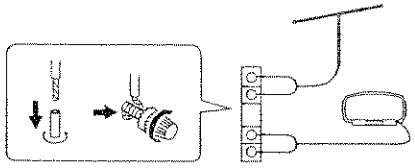
- Plug the power cord into the AC wall outlet only after all the connections have been completed.
- Be sure to connect an antenna. If you do not, broadcast signal reception will not be possible.

1 Assemble the AM loop antenna.

Insert the claw on the bottom of the antenna into the groove on the leg.

- To permanently fix the antenna, screw the leg to a wall or something similar before assembling.

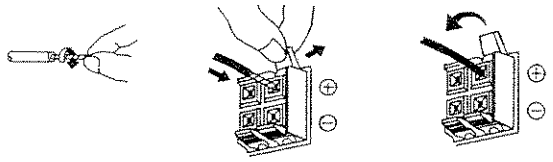
2 Connect AM loop antenna and FM T-type antenna to the antenna terminals of the receiver.



3 Connect the speaker cords to the SPEAKERS terminals.

Connect the red cords to the "+" (red) terminals and the black cords to the "–" (black) terminals.

① **Twist the wire strands.** ② **Push away the tab and insert the cord into the terminal.** ③ **Pull back the tab. Be sure to tighten the cords firmly.**



NOTE:

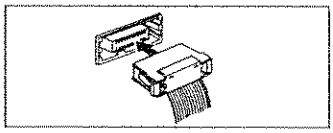
Do not allow the conductors of the cords to project out of the terminals or to come into contact with other conductors. A breakdown or failure may occur when conductors touch.

Speaker impedance

Connect speaker systems with a nominal impedance ranging from 8 to 16 Ω.

4 Connect the flat cable of the cassette deck CD player to the flat cable terminal of the receiver.

Insert the connector until it locks. When disconnecting the connector, pull it in the opposite direction while pressing the left and right claws.



Precaution:

When connecting or disconnecting the flat cable, do so only after disconnecting the power plug from the AC wall outlet.

5 When using a turntable, connect the output cord to the PHONO jacks and the ground wire to the GND terminal of this unit.

Except for U.K. model, the VIDEO jacks are provided instead of the PHONO jacks. When connecting a video cassette recorder, connect the audio output jacks to the VIDEO jacks of this unit.

6 Finally, connect the power cord to the AC wall outlet.

NOTE:

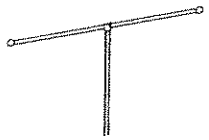
Insert the plugs securely into the jacks. Improper connection can lead to sound distortion or malfunction.

ANTENNA CONNECTIONS

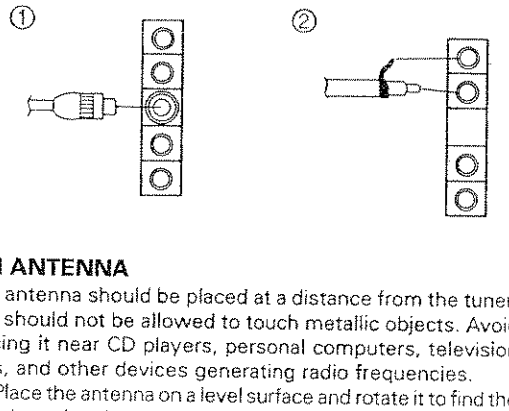
Radio reception is not possible unless the antenna is properly connected.
The strength of broadcast signals varies from one area to another. Signal propagation is especially poor in metropolitan areas, where there are many tall buildings, and in mountainous areas. Proper antenna installation is vital to good reception.

FM ANTENNA

FM antenna
Connect the accessory FM T-type antenna to the FM terminal. Stretch the antenna out to its full "T" shape, and affix it to a wall, etc.



External FM antenna installation
Use an external antenna when the signals from stations are weak and cannot be picked up by the accessory FM T-type antenna, or when the sound heard is accompanied by large amounts of noise.
U.K. model: If the FM antenna terminal is a PAL terminal, connect as shown in Figure ①.
U.S., Canadian, Australian and Multi-voltage models: If the FM antenna terminal is not a PAL terminal, connect as in Figure ② if using a 75 Ω coaxial cable.



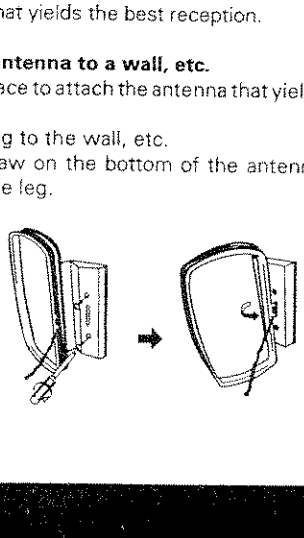
AM ANTENNA

The antenna should be placed at a distance from the tuner, and should not be allowed to touch metallic objects. Avoid placing it near CD players, personal computers, television sets, and other devices generating radio frequencies.

- Place the antenna on a level surface and rotate it to find the orientation that yields the best reception.

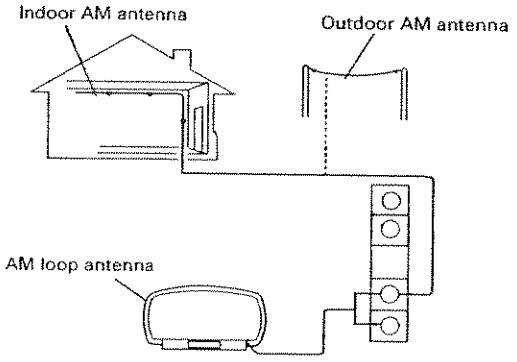
To attach the antenna to a wall, etc.

1. Select the place to attach the antenna that yields the best reception.
2. Screw the leg to the wall, etc.
3. Insert the claw on the bottom of the antenna into the groove on the leg.



External AM antenna
Indoor AM antenna
Provide a vinyl-coated wire (5 to 6 meters long). Secure one end to the AM terminal and the other end to a wall or other high location.
Outdoor AM antenna
If reception is still poor even when a lead antenna has been fully extended indoors, stretch out a vinyl-coated wire and secure it outdoors.

NOTE:
Do not detach the AM loop antenna when using the external AM antenna.



FM/AM CHANNEL STEP SWITCH

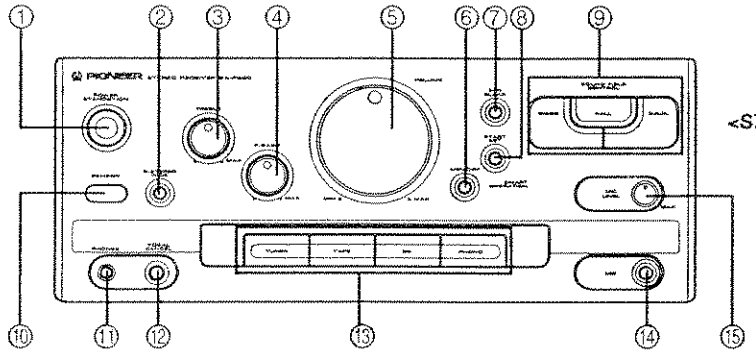
(For U.S., Canadian and multi-voltage models)
This switch is not provided on models for U.K., Europe and Australia. Adjustment is only necessary when there is a CHANNEL STEP switch on the rear panel.
The CHANNEL STEP switch is located on the rear panel of the stereo receiver. Before the stereo receiver leaves the factory, this switch is set to the channel step standard of the areas where the stereo receiver is sold.
Depending on the position of this switch, each time +/– (tuner up/down) is pressed, the frequency display changes by the following amount:
[100 kHz/10 kHz] position
For areas with a channel step of 100 kHz for FM and 10 kHz for AM.
[50 kHz/9 kHz] position
For areas with a channel step of 50 kHz for FM and 9 kHz for AM.

NOTE:
If the switch is set to the wrong position, correct tuning may not be possible.

Consult your dealer if you are not sure about the radio channel step standard in your area.

NAMES AND FUNCTIONS OF PARTS

AMPLIFIER



<SX-P520>

AMPLIFIER

① POWER STANDBY/ON switch

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness. (The display shows only the time.)

② S.STEREO WIDE button (p. 16)

③ TREBLE button (SX-P420) (p. 16)
TREBLE control (SX-P520) (p. 16)

④ P.BASS control (p. 16)

⑤ VOLUME control

⑥ SMART OPERATION MEMORY button (p. 17)

⑦ SFC CLEAR button (p. 16)

⑧ SMART OPERATION START/SET button (p. 17)

⑨ SOUND FIELD CONTROL buttons (DISCO, HALL, B.G.M.) (p. 16)

⑩ Remote sensor window (SENSOR) (p. 5)

⑪ Headphones jack (PHONES)

⑫ VOCAL CANCEL button (p. 18) (multi-voltage and Australian models only)

⑬ Input selector buttons (TUNER/TAPE/CD/PHONO)
Except for U.K. model: (TUNER/TAPE/CD/VIDEO)

⑭ Microphone jack (MIC) (p. 18) (multi-voltage and Australian models only)

⑮ MIC LEVEL control (p. 18) (multi-voltage and Australian models only)

Auto Function

This model is equipped with "Auto Function" operation, so when the switch for CD PLAY, RANDOM, PLAY (tape), +/– (tuner up/down) or BAND is pressed, the function switches automatically. Use the PHONO (VIDEO) function button to select the component connected to the PHONO (VIDEO) jacks, since Auto Function is not effective for this.

NOTE:

The function cannot be switched during recording except for tape copying. (Auto Function does not operate either.)

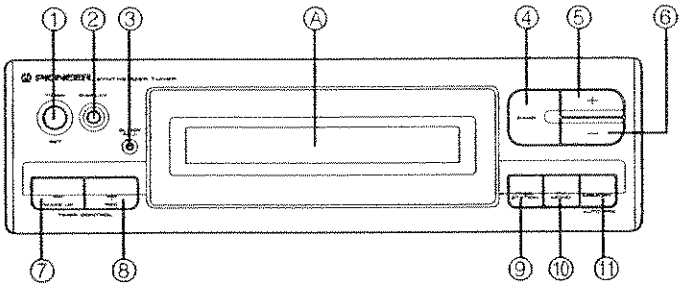
Demo Function

To enter the demo mode, press SFC CLEAR when power is off. The power is automatically turned on. In the demo mode, various functions of this system appear on the display. When a program source is selected, you can enjoy listening to the selected source simultaneously.

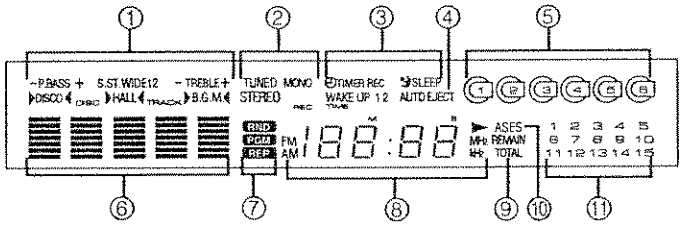
To cancel demo mode:

Press any button of the amplifier or remote control unit.

TUNER



Ⓐ DISPLAY



TUNER

① **TIMER SET button (p. 11, 19, 21)**
② **DISPLAY button (p. 12)**
③ **CLOCK ADJ. button (p. 11)**
Ⓐ **Display**
④ **BAND button (p. 12)**
⑤ **+ (tuner up) button (p. 12, 15)**
⑥ **– (tuner down) button (p. 12, 15)**
⑦ **TIMER CONTROL WAKE UP/– button (p. 11, 19, 21)**
⑧ **TIMER CONTROL REC/+ button (p. 11, 19, 21)**
⑨ **FREQ./STATION button (p. 12, 15)**
⑩ **FM MONO button (p. 12)**
⑪ **AUTO PRE. MEMORY button (p. 13, 14)**

Ⓐ DISPLAY

① **Sound field control indicators**
Display the SOUND FIELD CONTROL settings.

② **Tuner indicators**
Indicate the tuning mode.

③ **Timer indicators**
Display timer settings.

④ **AUTO EJECT indicator (For PDC-P520T)**
Lights when AUTO EJECT function is ON.

⑤ **Disc number indicators (For PDC-P520M and PDC-P520T (No.1 and No. 2 only))**

⑥ **Function display**
Normally functions as a spectrum analyzer.
Also, this displays the selected function. In the TUNER mode, this displays the station No., and when playing a CD it displays the track No.

⑦ **RND:** Lights during random play for CD player.
PGM: Lights during program input and program play for CD player.
REP: Lights during repeat play for CD player.

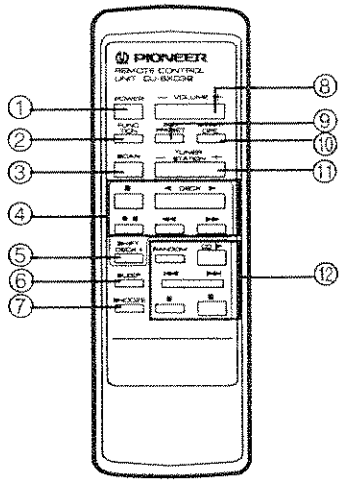
⑧ **Frequency/Time display**
In TUNER mode, frequency is displayed. In any other mode it displays the time.

⑨ **REMAIN/TOTAL indicator (For CD player)**
In CD mode, "REMAIN" shows the remaining play time and "TOTAL" shows the total play time.

⑩ **ASES (Auto Synchro Editing System) indicator**
Lights when A.S.E.S. is performed.

⑪ **Music calendar (For CD player)**

NAMES AND FUNCTIONS OF PARTS



- The illustration shows the remote control unit supplied with the SX-P420 model.

REMOTE CONTROL UNIT

① POWER button

② FUNCTION button

Each time this button is pressed, the function changes in the following sequence: TUNER → TAPE → CD → PHONO → (Except for U.K. model: VIDEO)

③ SCAN button

In TUNER mode: This button is used for scanning preset stations. **(p. 15)**
In CD mode: This button is used for Hi-Lite Scan.

④ DECK I/II operation buttons

(◄◄ ► Play, ■ Stop, ◄◄ ►► Fast, ● II Rec pause)

⑤ SHIFT DECK II button

To operate Deck II, press the desired deck operation button while pressing this button.

⑥ SLEEP button (p. 20)

⑦ SNOOZE button (p. 20)

⑧ VOLUME –/+ button

⑨ SFC PRESET button (p. 16)

Each time this button is pressed, the SOUND FIELD CONTROL setting changes in the following sequence: DISCO → HALL → BGM → SFC clear

⑩ SMART OPE. button (p. 17)

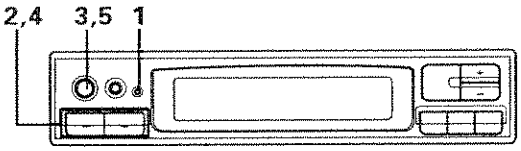
⑪ TUNER STATION –/+ button (p. 14, 15)

⑫ CD operation buttons

(► Play, ■ Stop, II Pause, |◄◄ ►►| Track search, RANDOM (For SX-P420/PDC-P420), **DISC** (For SX-P520/PDC-P520T and PDC-P520M))

SETTING THE CLOCK

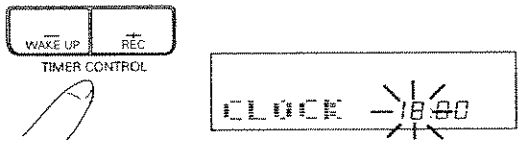
- Set the clock when it has been incorrectly set, or when power has been cut to the unit.
- This clock provides a 24 hour display.
- The clock cannot be set by the remote control unit.



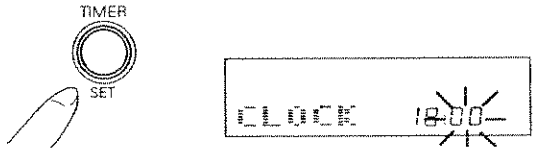
Example: Setting the clock to 18:40

1 Press CLOCK ADJ.
It is easy to press using a ball-point pen.

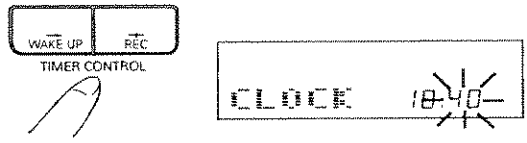
2 Use WAKE UP (–) and REC (+) to set the hour.



3 Press TIMER SET.



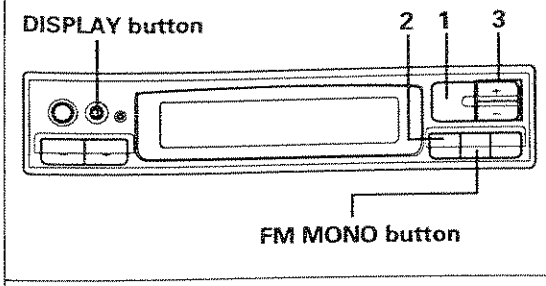
4 Use WAKE UP (–) and REC (+) to set the minute.



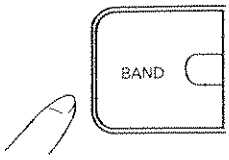
5 Press TIMER SET when "00" seconds of that minute are reached for precise adjustment.
"CLOCK" will disappear in about 2 seconds.

- After connecting to an AC outlet, be sure to set the present time. Timer playback and timer recording are not possible unless the time has been set.
- The time indication will appear as "- -:- -" if the AC power cord is unplugged or a power failure occurs. Be sure to set the time again upon reconnecting power.

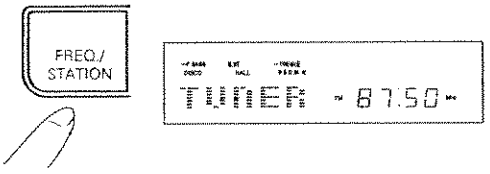
TUNING INTO STATIONS



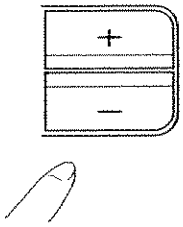
1



2



3



- Broadcast reception is not possible unless an antenna is connected, so be sure to connect one.

1 Select AM (MW or LW) or FM with BAND.

2 Press FREQ./STATION to select frequency mode.
"TUNER" appears on the display.

3 Press + (tuner up) for higher frequencies or – (tuner down) for lower frequencies.
The TUNED indicator lights up when a station of sufficient signal strength is tuned in.

• One step tuning
Press + or – and release quickly. The frequency will change by one step* each time the button is pressed. Press as many times as necessary to tune in the desired station.

*One step
U.K. model ..... FM: 50 kHz, AM (MW): 9 kHz, (LW): 1 kHz
Australian model ..... FM: 50 kHz, AM: 9 kHz
Multi-voltage, U.S. and Canadian models
Depending on the position of the FM/AM CHANNEL STEP switch on the rear panel, one step changes as follows.
[100 kHz/10kHz] position ..... FM: 100 kHz, AM: 10 kHz
[50 kHz/9kHz] position ..... FM: 50 kHz, AM: 9 kHz

• Auto tuning
Press + or – until the frequency starts to change (1-2 sec.), then release it. The tuner will automatically search for a broadcasting station and stop when one is found, and the TUNED indicator lights up.
To search for another station, press again.

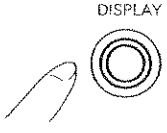
NOTE: (For U.K. model)
Auto tuning is not possible on the LW band.

• High speed manual tuning
Keep + or – pressed. The frequency changes continuously, and stops when the switch is released.

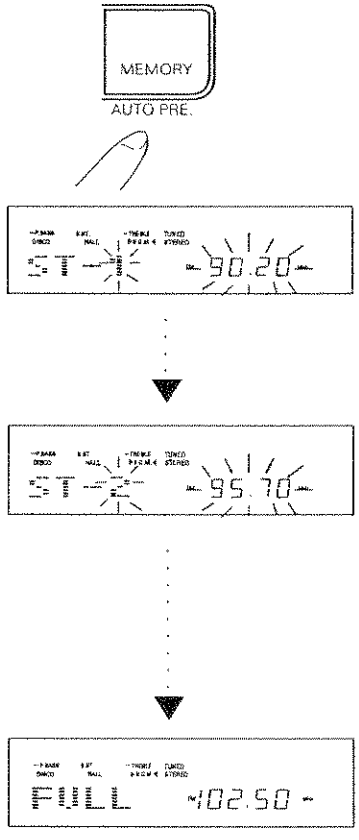
FM MONO button
During FM reception: Switches between stereo and monaural modes when listening to a stereo broadcast. If there is a lot of noise in the stereo position, switch to MONO and the noise will be suppressed.

Last station memory
The last received AM and FM stations remain stored regardless of function and/or POWER switching.

To change the display mode:
Each time DISPLAY is pressed, the display switches between tuner mode and the current time.



MEMORIZING STATIONS



Auto presetting

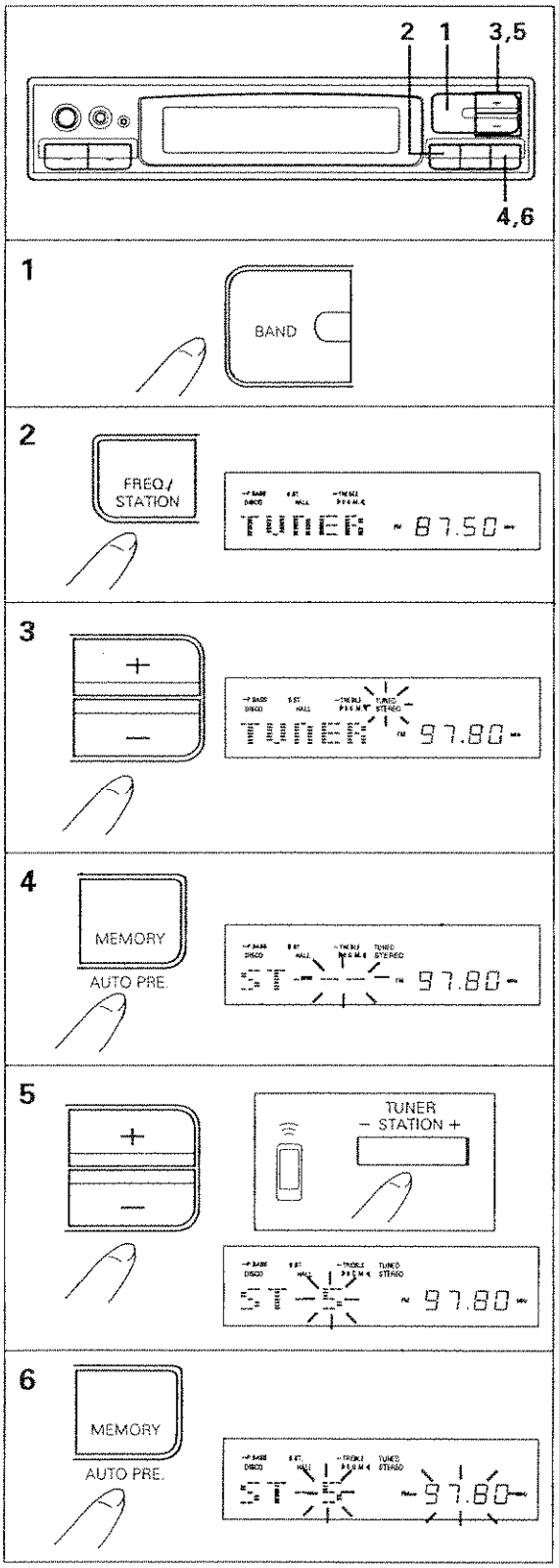
Up to 24 FM/AM stations can be automatically memorized.

Keep AUTO PRE. MEMORY pressed for more than 5 seconds.

Auto presetting starts from the current station.
The reception frequencies are scanned for receivable stations and they are automatically stored in the station memory starting from ST-1. (First "AUTO" appears on the display.)
When 24 stations are stored, "FULL" appears on the display.

NOTES:

- *To cancel the auto presetting operation, press BAND, + (tuner up) or – (tuner down).*
- *Auto presetting is not possible on the LW band (U.K. model only).*



Manual presetting

- Up to 24 FM/AM stations can be memorized at random.
- For FM reception, the FM MONO setting can be memorized.

Example: To store FM station with a frequency of 97.80 MHz in station No. 5.

1 Select AM (MW or LW) or FM with BAND.

2 Press FREQ./STATION to select frequency mode.
"TUNER" appears on the display.

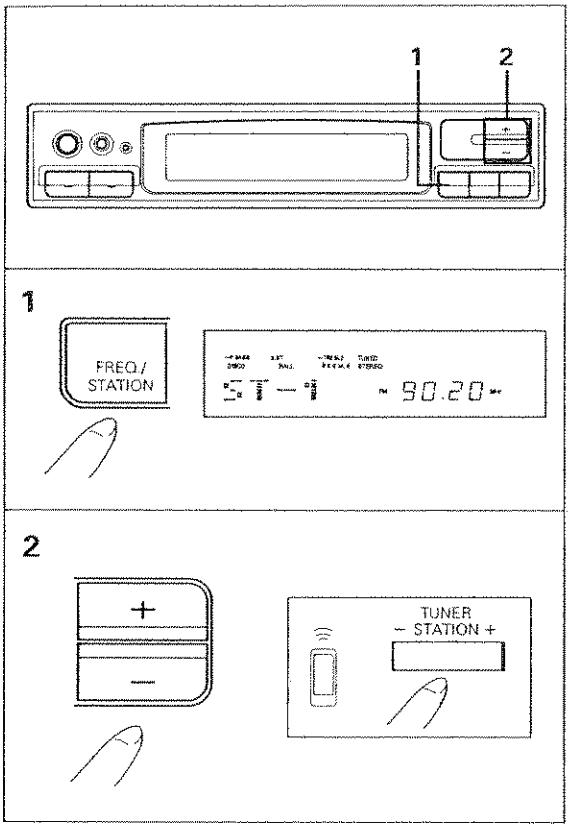
3 Tune in the desired station with + or –.

4 Press AUTO PRE. MEMORY.
"ST – – – " appears on the display.

5 Select the station number to be memorized with + or –.
Operate while the display is flashing (it flashes for about 5 seconds).

6 Press AUTO PRE. MEMORY.
Operate while the display is flashing (it flashes for about 5 seconds).
The displayed frequency is stored in the selected station No. Repeat steps 2 through 6 to memorize up to 24 stations.

Operations indicated by the [ ] mark are performed with the remote control unit.



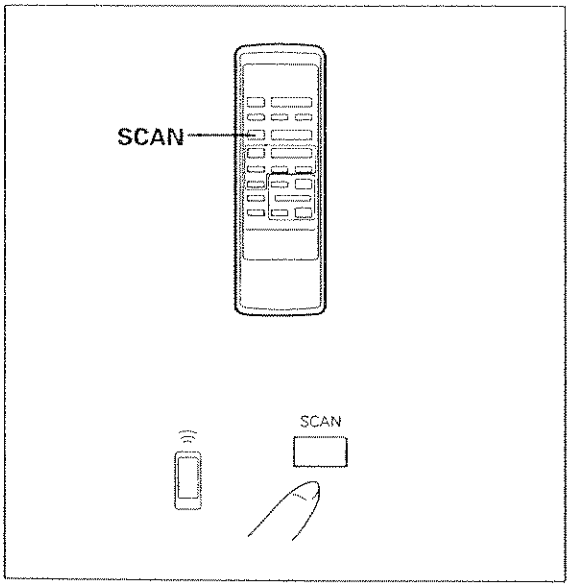
Station call

1 Press FREQ./STATION to select station mode.
Station No. appears on the display.

2 Select the station No. you want to recall with + or –.

NOTES:

- *The memorized stations will not be erased even if the power is turned off. However, if the AC power cord is unplugged or a power failure occurs, the memorized stations will be erased. (If the AC power cord is unplugged, the memorized stations will be preserved for several days.)*
- *If the memorized stations have been erased, memorize them again.*

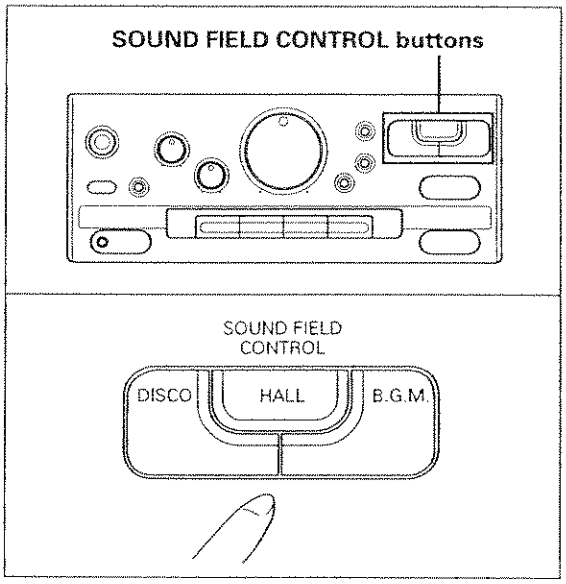


Scanning memorized stations

1 Press SCAN on the remote control unit during station reception.
Each memorized station is tuned in for about 5 seconds.

2 Press SCAN again as soon as the desired station is tuned in.

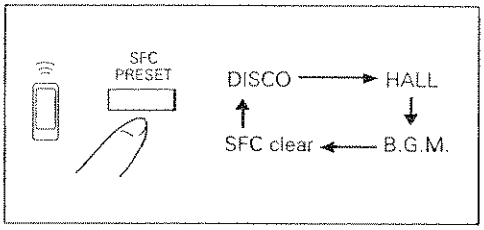
ADJUSTING THE SOUND (SOUND FIELD CONTROL OPERATION)

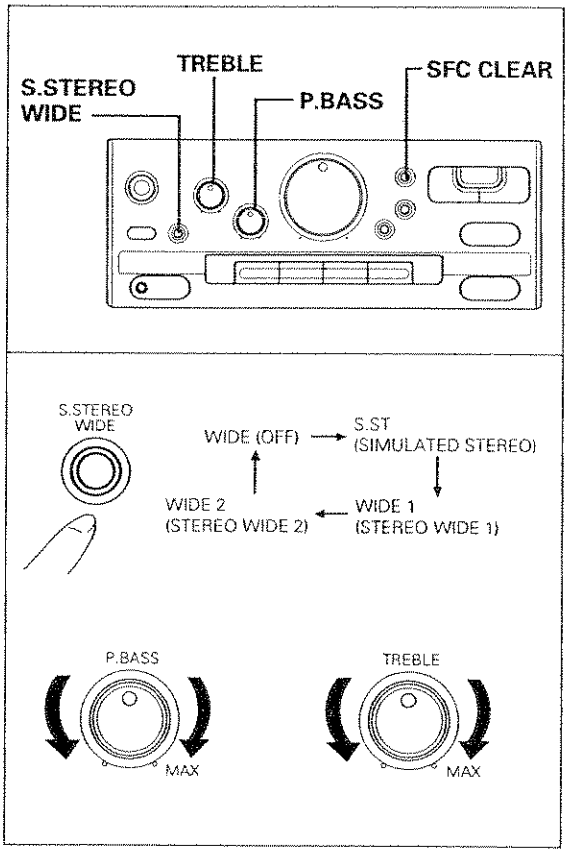


Selecting a preset sound setting

Select one of the three settings with the SOUND FIELD CONTROL buttons.

DISCO: Creates the sensation of being in a disco, with a lot of reverberation.
HALL: Gives you the feeling of being at a classical concert.
B.G.M.: Gives you a simulated stereo with lowered bass and treble response.





Adjusting the sound in manual mode

Adjust the sound using TREBLE and S. STEREO WIDE.

TREBLE button: (SX-P420)
Adjusts the high-frequency sound level.
Each time TREBLE is pressed, the setting changes in the following sequence: FLAT → TREBLE + → FLAT → TREBLE – → FLAT

S. STEREO WIDE (Simulated Stereo/Stereo wide) button:
Creates a more expansive sound image.
Each time S. STEREO WIDE is pressed, the setting changes in the following sequence:

WIDE (OFF) → S.ST (SIMULATED STEREO) → WIDE 1 (STEREO WIDE 1) → WIDE 2 (STEREO WIDE 2) → WIDE (OFF)

To clear SOUND FIELD CONTROL settings

Press SFC CLEAR.

P. BASS control:

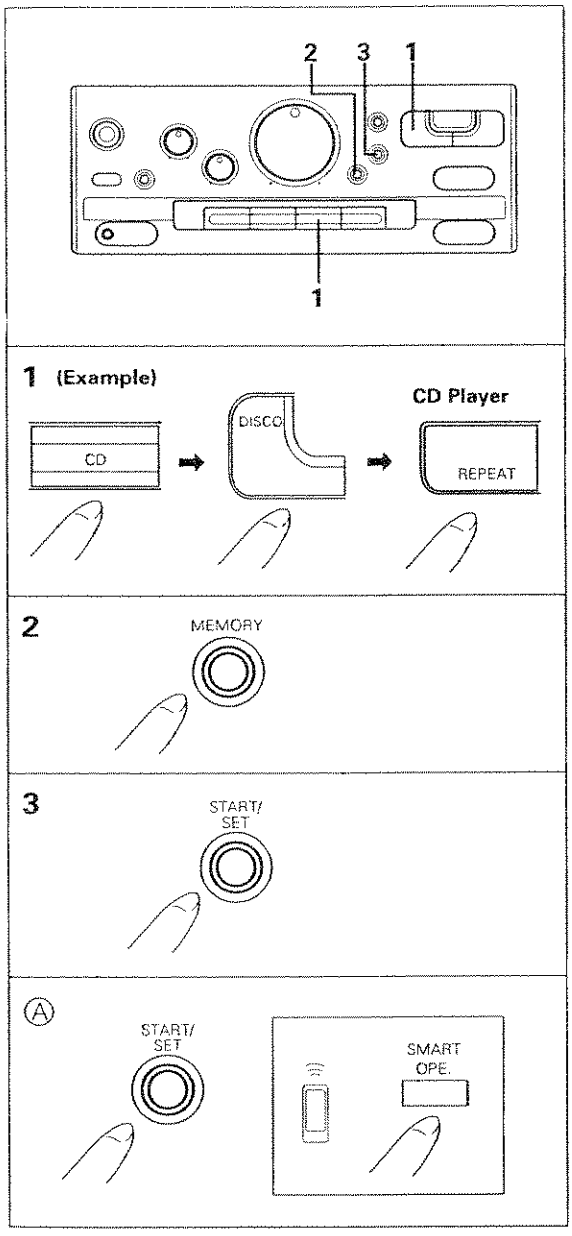
Adjusts the low-frequency sound level.
Turning fully counterclockwise will obtain the flat (normal) setting. When turned to the right, low-frequency tones are emphasized; when turned to the left, low-frequency tones are de-emphasized.

TREBLE control: (SX-P520)

Adjusts the high-frequency sound level.
Turning fully counterclockwise will obtain the flat (normal) setting. When turned to the right, high-frequency tones are emphasized; when turned to the left, high-frequency tones are de-emphasized.

- The setting of the P. BASS control and TREBLE control is not canceled even when SFC CLEAR is pressed.

SMART OPERATION



Memorizing your usual listening settings

This function lets you recall your usual listening settings by simply pressing a single button.
The following settings can be memorized:

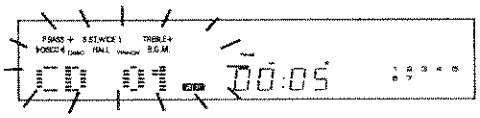
- Function
  (CD, TUNER, TAPE, PHONO (VIDEO))
- SOUND FIELD CONTROL settings
- CD repeat playback or random playback setting
- Tuner Station No.

1 Select the appropriate settings to be memorized.

Example: To carry out the DISCO setting when a CD is played in repeat mode.

2 Press SMART OPERATION MEMORY.

The display of the various settings to be memorized will flash.



3 Press SMART OPERATION START/SET within 5 seconds.

Ⓐ To recall the memory

Press SMART OPERATION START/SET.
Memorized settings flash on the display for about 5 seconds.

- Memory recall is also possible when power is off.

NOTES:

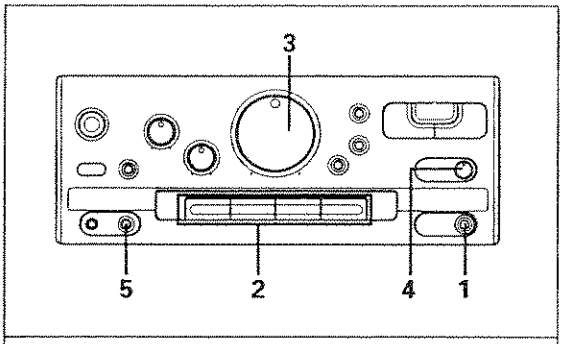
- *If the AC power cord is unplugged or a power failure occurs, the memorized settings will be erased.*
- *The track No. of CD or Deck I/Deck II cannot be memorized.*
- *When CD programming is performed and the power has not been turned off, tracks will be played in the programmed order.*

To search for a program source which can be played by switching functions automatically

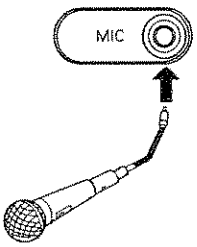
When the settings of the smart operation are not memorized, pressing SMART OPERATION START/SET searches for a program source which can be played by switching functions automatically. The located program source will be played.

Press SMART OPERATION START/SET.
A CD is played back.
If there is no disc in the tray ...
↓
A tape in Deck I is played back.
If there is no tape in Deck I ...
↓
A tape in Deck II is played back.
If there is no tape in Deck II ...
↓
A broadcast will be heard.
If no broadcast is received ...
↓
Function returns to the CD.

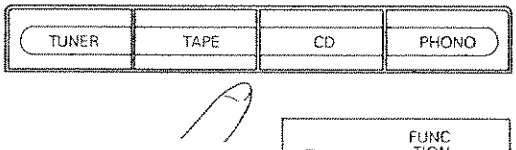
VOCAL CANCEL OPERATION (For multi-voltage and Australian models only)



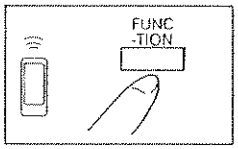
1



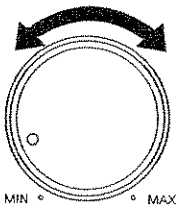
2



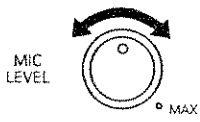
This illustration shows U.K. model.



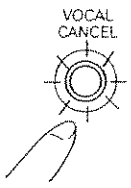
3



4



5



- This function cuts frequencies in the vocal range during playback of a stereo source such as a CD, tape, or stereo FM broadcast. Setting the VOCAL CANCEL button to ON, and singing into a microphone provides an easy way to enjoy karaoke. (Although this function cuts frequencies in the vocal range, it does not completely eliminate the sound of the vocals.) This function has no effect with monaural sources.
- Achieving the full effect of this function may not be possible with songs featuring duets, different vocals on left and right channels, strong echo effects, or depending on recording conditions of sources.
- This function is most effective with sources other than tape.

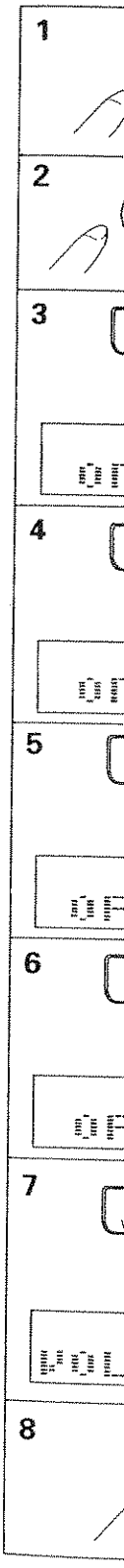
1 Connect a microphone to the microphone jack.
2 Use the input selector buttons to select the desired sound source.
3 Adjust the sound volume as desired.
4 Use the MIC LEVEL control to adjust the sound volume of the microphone.
5 Begin playback of the sound source, and press the VOCAL CANCEL button.
6 Sing into the microphone to accompaniment of the music.

For microphone mixing recording:
You can record the results of your microphone mixing on Deck II.
- When playing back the recorded tape, set the VOCAL CANCEL to OFF.

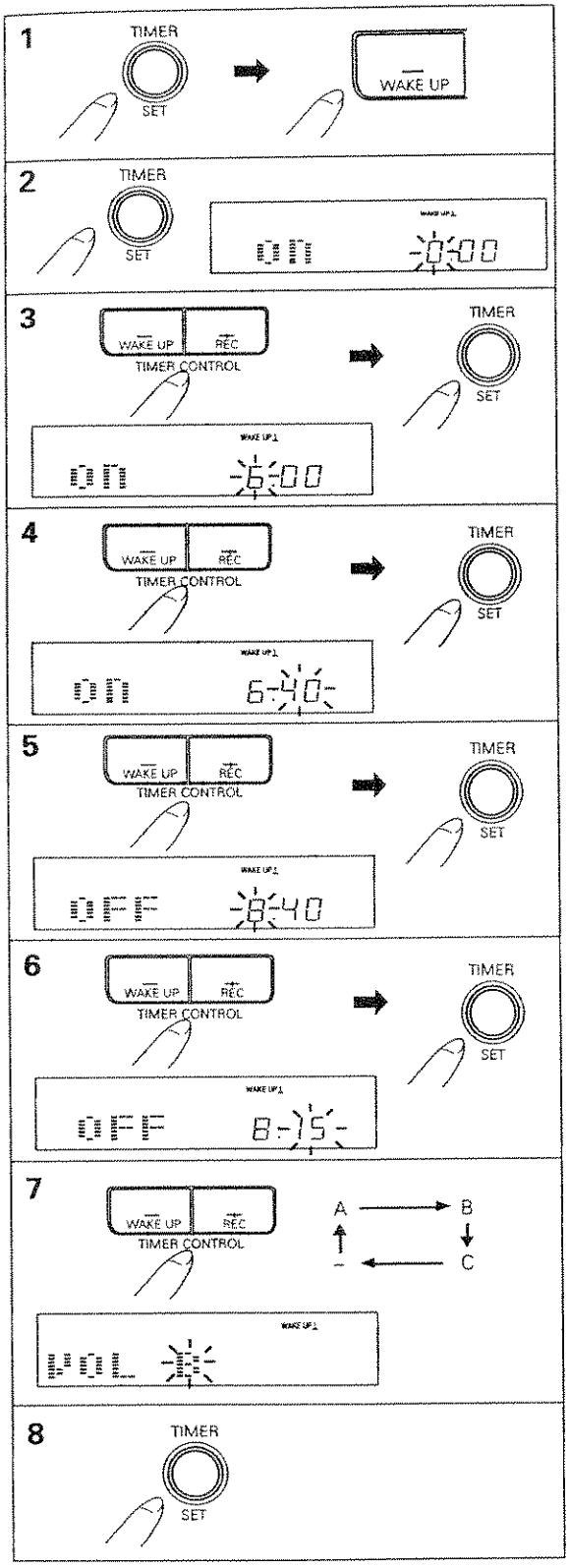
NOTE:
Microphone mixing recording cannot be performed when TAPE has been selected in step 2.

If howling (microphone feedback) occurs:
During use of the microphone, if a high-pitched howling sound comes from the speakers, do one of the following:
① Turn MIC LEVEL counterclockwise to decrease the microphone volume.
② Locate the microphone away from the speakers.
③ Lower the sound volume.

TIMER



TIMER PLAYBACK



Timer setting

- A compact disc, cassette tape or radio broadcast can be used instead of an alarm clock.
- Timer playback begins every day at the same time as long as the timer playback mode is not canceled.
- You can set two different timers; WAKE UP 1 and WAKE UP 2.

Before setting the timer:

1. Set the SOUND FIELD CONTROLs as desired.
2. Select the desired program source with the input selector buttons.
3. With a CD, load a CD into the player, and set REPEAT and/or RANDOM if necessary.
   With a cassette tape, load a cassette tape into the deck, specify the tape running direction with ◄ or ► and stop the tape.
   With a preset station, select the station No.

Example: Using WAKE UP 1 to play a CD from 6:40 to 8:15.

1 Press TIMER SET and then (within 5 seconds) press WAKE UP (–).
Press WAKE UP once to select WAKE UP 1.
Press WAKE UP twice to select WAKE UP 2.

2 Press TIMER SET within 5 seconds.

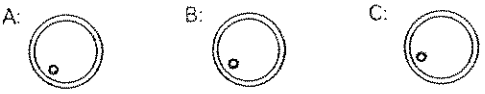
3 Set the wake up (ON) hour using WAKE UP (–)/REC (+) and press TIMER SET.

4 Set the wake up (ON) minute using WAKE UP (–)/REC (+) and press TIMER SET.
If you make no further changes within approx. 5 seconds, the OFF time is set as one hour after the ON time.

5 Set the turn OFF hour using WAKE UP (–)/REC (+) and press TIMER SET.

6 Set the turn OFF minute using WAKE UP (–)/REC (+) and press TIMER SET.

7 Set the desired volume level using WAKE UP (–)/REC (+).
You can select from among four volume level settings. Each time you press REC (+), the volume level setting changes in the following sequence: "A" → "B" → "C" → "–" (The volume setting when the timer is turned on.)



8 Press TIMER SET.
This completes timer setting.
Timer on time, timer off time, volume level setting and function setting are displayed in order.

[To activate the timer]

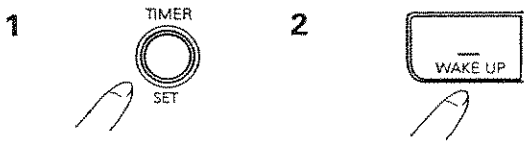
9 Press WAKE UP (–) and WAKE UP 1 or WAKE UP 2 will light in the display.
Press once for WAKE UP 1
Press twice for WAKE UP 2

10 Turn the power off with POWER STANDBY/ON.

- If the selected program source cannot be played (For example, when CD is selected, there is no disc in the tray, etc.) the unit searches for a program source which can be played by switching functions automatically.

Tape playback:
Timer playback is possible with a cassette tape loaded in deck I or deck II. When tapes are loaded into both decks, relay playback will be carried out.

To check timer settings



1 **Press TIMER SET.**
2 **Press WAKE UP within 5 seconds.**
Press once to select WAKE UP 1.
Press twice to select WAKE UP 2
3 **After 5 seconds, the display changes to the check mode, and timer settings are displayed in order.**

To change timer settings

To change all of the timer settings, start over again, inputting the settings that you want.
To change only one of the timer settings (after pressing TIMER SET and WAKE UP 1 or 2), press TIMER SET repeatedly until the display shows the item that you wish to change. Then use WAKE UP (–) and REC (+) to adjust the setting. Finally, repeatedly press TIMER SET to advance to the end of the procedure.

NOTES:
- *If the AC power cord is unplugged or a power failure occurs, set the timer again.*
- *When ON time setting is changed, OFF time setting changes automatically. Therefore, reset OFF time, if necessary.*

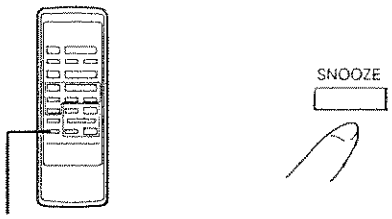
If you make a mistake while setting the timer

Go ahead to the next item and continue setting the various items until you finish. Then use the "To change timer settings" procedure to change the value of the item that was incorrect.

Turning the timer on and off

After entering the timer settings, check the display section to confirm which timer is on. The one that is lit (WAKE UP 1 or 2) is the one that will be executed.
If you press WAKE UP to turn off the indication, the timer will not operate. However, since the settings remain stored in memory, you can press WAKE UP again to reactivate the timer.

The SNOOZE function

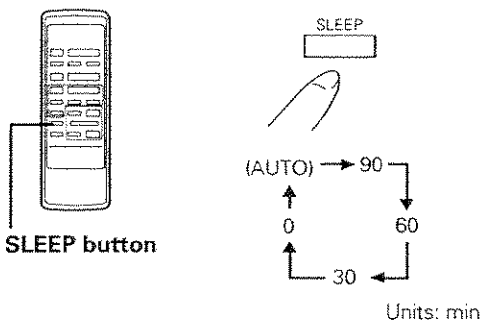


SNOOZE button

After timer playback begins, you can press SNOOZE on the remote control unit to turn the power off temporarily. It comes back on after about 5 minutes.

NOTE:
Power will stay off and play will not resume after 5 minutes if SNOOZE is pressed when there is less than 5 minutes time remaining in the timer setting.

SLEEP TIMER



Sleep timer - Automatically turns off power

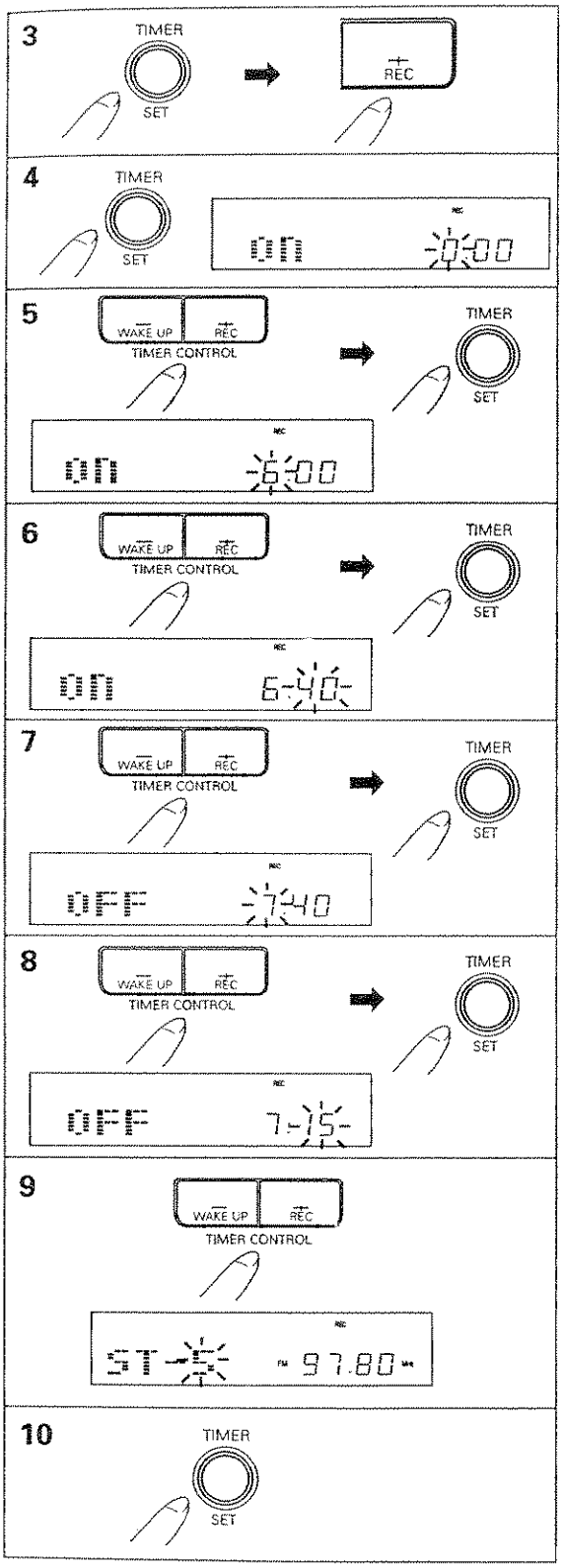
Power turns off automatically after the specified time has elapsed. Each time SLEEP is pressed, the setting changes in the following sequence: AUTO (during recording only) → 90 → 60 → 30 → 0.
When sleep timer operates, the display section becomes less bright.

Auto sleep

If SLEEP is pressed during recording, auto sleep is switched on. When recording finishes, power is automatically switched off.

NOTE:
If you press SLEEP during Sleep operation, the time remaining till the power turns off is displayed. Do not press SLEEP while the remaining time is displayed. Otherwise, the setting changes and the sleep timer cannot function properly.

TIMER RECORDING



Timer setting

This allows unattended recording of radio broadcasts.

- Timer recording will be carried out with a preset station. Store the station to be recorded in preset memory beforehand.
- The timer recording mode is deactivated after it has been performed once.

Example: ST-5 is recorded from 6:40 to 7:15.

1 **Load the tape for recording into Deck II.**
Timer recording should begin in the forward direction (►).
- Check to see that the cassette's accidental erasure prevention tabs have not been removed.

2 **Set DOLBY NR on the cassette tape deck to the desired position.**

3 **Press TIMER SET and then (within 5 seconds) press REC (+).**

4 **Press TIMER SET within 5 seconds.**

5 **Set the recording (ON) hour using WAKE UP (–)/REC (+) and press TIMER SET.**

6 **Set the recording (ON) minute using WAKE UP (–)/REC (+) and press TIMER SET.**
If you make no further changes within about five seconds, the OFF time is set as one hour after the ON time.

7 **Set the turn OFF hour using WAKE UP (–)/REC (+) and press TIMER SET.**

8 **Set the turn OFF minute using WAKE UP (–)/REC (+) and press TIMER SET.**

9 **Set the desired station No. using WAKE UP (–)/REC (+).**

10 **Press TIMER SET.**
This completes timer setting.
Timer ON time, timer OFF time and station No. are displayed in order.

[To activate timer recording]

11 **Press REC (+) and REC will light in the display.**

12 **Turn the power off with POWER STANDBY/ON.**

NOTES:

- *When timer recording starts, the volume is set to minimum automatically. If you want to listen to the sound, adjust the volume with the VOLUME control after timer recording starts.*
- *If you do not turn off the power after setting the timer, timer recording will not be carried out.*
  If timer settings are overlapped, the later timer setting will not be carried out.

TIMER RECORDING

To check timer settings

1 **Press TIMER SET.**
2 **Press REC (+) within 5 seconds.**
3 **After 5 seconds, the display changes to the check mode, and timer settings are displayed in order.**

To change timer settings

To change all of the timer settings, start over again, inputting the settings that you want.
To change only one of the timer settings (after pressing TIMER SET and REC), press TIMER SET repeatedly until the display shows the item that you wish to change. Then use WAKE UP (–) and REC (+) to adjust the setting. Finally, repeatedly press TIMER SET to advance to the end of the procedure.

NOTE:
When ON time setting is changed, OFF time setting changes automatically. Therefore, reset OFF time, if necessary.

If you make a mistake while setting the timer

Go ahead to the next item and continue setting the various items until you finish. Then use the "To change timer settings" procedure to change the value of the item that was incorrect.

Turning the timer on and off

Confirm that the REC indicator is lit on the display.
Timer recording ends after being performed once. However, since the settings remain stored in memory, you can reactivate the timer by pressing TIMER REC so that the REC indicator is lit again.

About timer setting priority

ON time: If REC timer and WAKE UP 1/2 timer are both at the same ON times, REC timer takes priority.
OFF time: When REC timer, WAKE UP 1/2 timer and SLEEP timer operate, earlier OFF time takes priority.

NOTE:
When WAKE UP timer and REC timer are set in succession, set these timers having an interval of 1 minute or more.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

General

Symptom	Cause	Remedy
There is no power.	• AC cord is unplugged.	• Plug power cord into wall socket.
No power is supplied to the cassette deck CD even when the POWER switch is turned on.	• The flat cable is disconnected.	• Refer to "CONNECTIONS" and connect the flat cable securely.
No sound from speakers.	• Volume is turned all the way down. • Speaker cords are disconnected. • Speaker cords are connected with vinyl insulation still on. • Function is not set to the desired listening source. • Connection cords are not connected or are incorrectly connected.	• Raise volume setting. • Connect speaker cords correctly. • Strip vinyl insulation from speaker wire tips before connecting. • Select correct function. • Connect correctly.
Sound from only one speaker.	• One of the speaker cords is disconnected or damaged.	• Connect correctly or replace with new cord.
Strange sounds heard (or recorded from) tape, CD or radio.	• TV is on. • The unit is too close to TV.	• Turn off TV. • Move TV away until interference stops.

Tuner

Symptom	Cause	Remedy
No AM reception.	• Loop antenna is not connected. • Wrong radio band. • Station not tuned in.	• Connect Loop antenna correctly. • Set to desired radio band. • Tune in station.
Beat noise heard.	• TV is on. • Loop antenna position bad.	• Turn off TV or move TV away. • Change loop antenna position.
Noise heard.	• Interference from nearby fluorescent light, hair dryer, or other electrical appliance.	• Stop using device causing interference.
Sound is distorted.	• Antenna in poor position. • Broadcast is weak. • Interference from other electrical devices or multipath reception.	• Change antenna position. • Use external antenna. • Change antenna position.
There is no stereo sound.	• Broadcast signal is weak, antenna input is insufficient. • The FM MONO button is turned on.	• Change to a multi-element external antenna. • Press FM MONO so that the MONO indicator goes out.

Clock and Timer

No time indication.	• There was a power outage. • AC plug was pulled out.	• Set time again. • Set time again.
Timer does not work.	• Current time is not set. • Start and/or stop time is not set. • Timer is not on. • ON time and OFF time are set at the same time.	• Set current time. • Set ON and OFF times. • To use timer, press WAKE UP (–) or REC (+) so that the timer display lights. • Set ON and OFF times having an interval of 1 minute or more.

Remote control unit

Remote control does not work.	• Batteries are dead or no batteries in remote control unit. • Poor angle or too great a distance from the remote sensor window. • There is an obstacle between you and the remote sensor window.	• Insert new batteries. • Use within seven meters (23 feet) and within a 30 degree angle of the remote sensor window. • Change your position or move the obstacle.

- Installation in close proximity to TV may cause noise or degradation of the picture. Such noise may be particularly noticeable when an indoor antenna is used. In such cases, make use of an outdoor antenna, or move the unit away from TV set.
- Abnormal functioning of this unit may be caused by lightning, static electricity, or other external interference. To restore normal operation, turn the power off and then on again, or unplug the AC power cord and then plug it in again.

SPECIFICATIONS

STEREO TUNER AMPLIFIER: SX-P520

Amplifier Section

Continuous Average Power Output is 32 Watts* per channel, min., at 8 ohms from 40 Hertz to 20,000 Hertz with no more than 0.9 % total harmonic distortion.

Continuous Power Output (DIN) ..... 30 W + 30 W
(1 kHz, T.H.D. 5%, 8 ohms)
Continuous Power Output (RMS)
U.K. and Australian models ..... 35 W + 35 W
(1 kHz, T.H.D. 5%, 8 ohms)
U.S. and Canadian models ..... 35 W + 35 W
(1 kHz, T.H.D. 5%, 8 ohms)
Multi-voltage model ..... 35 W + 35 W
(1 kHz, T.H.D. 5%, 8 ohms)
Music Power (DIN)
U.K. and Australian models ..... 48 W + 48 W
(1 kHz, T.H.D. 10%, 8 ohms)
Multi-voltage model ..... 48 W + 48 W
(1 kHz, T.H.D. 10%, 8 ohms)
Peak Music Power
(Multi-voltage model only) ..... 270 W
Total Harmonic Distortion
(1 kHz, 20 W, 8 ohms) 0.2%**

Miscellaneous

Power Requirements
U.K. and Australian models ..... 240 V AC, 50/60 Hz
U.S. and Canadian models ..... 120 V AC, 60 Hz
Multi-voltage model ..... 110/120 – 127/220/240 V AC
(switchable), 50/60 Hz
Power Consumption
U.S. and Canadian models ..... 70 W
Other destination models ..... 150 W
Dimensions ..... 260 (W) x 180 (H) x 301 (D) mm
10-1/4 (W) x 7-1/16 (H) x 11-13/16 (D) in.
Weight (without package) ..... 4.9 kg (10 lb 13 oz)

STEREO TUNER AMPLIFIER: SX-P420

Amplifier Section

Continuous Power Output (DIN) ..... 24 W + 24 W
(1 kHz, T.H.D. 5%, 8 ohms)
Continuous Power Output (RMS) ..... 30 W + 30 W
(1 kHz, T.H.D. 5%, 8 ohms)
Music Power (DIN) ..... 40 W + 40 W
(1 kHz, T.H.D. 10%, 8 ohms)
Total Harmonic Distortion
(1 kHz, 17.5 W, 8 ohms) 0.2%**

Miscellaneous

Power Requirements ..... 240 V AC, 50/60 Hz
Power Consumption ..... 170 W
Dimensions ..... 260 (W) x 180 (H) x 301 (D) mm
Weight (without package) ..... 4.6 kg

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier
** Measured by audio spectrum analyzer

FM/AM Tuner Section

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108.0 MHz
Usable Sensitivity ..... Mono: 12.8 dBf, IHF
(1.2 µV/75 ohms)
Sensitivity (DIN) ..... Mono S/N 26 dB: 1 µV/75 ohms
Stereo S/N 46 dB: 50 µV/75 ohms
Signal-to-Noise Ratio (IHF, 85 dBf Input) ..... Mono: 77 dB
Stereo: 73 dB
Signal-to-Noise Ratio (DIN) ..... Mono: 66 dB
Stereo: 60 dB
Distortion ..... Stereo: 0.5 % (1kHz)
Antenna Input ..... 75 Ω unbalanced

AM (MW) Tuner Section

Frequency Range
With 10 kHz step ..... 530 kHz to 1,700 kHz
With 9 kHz step ..... 531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 350 µV/m
Antenna ..... Loop Antenna

LW Tuner Section (U.K. model only)

Frequency Range ..... 153 kHz to 281 kHz
Sensitivity (IHF, Loop antenna) ..... 1500 µV/m
Antenna ..... Loop Antenna

SPEAKER SYSTEM: S-P520/S-P520A/S-P520D

Enclosure ..... Bass reflex type
System ..... 3-way 3-speaker system
(Book-shelf style)
Loudspeakers:
Woofer ..... 14 cm (5-1/2 in.) cone type
Mid-range ..... 6.6 cm (2-5/8 in.) cone type
Tweeter ..... 2.5 cm (1 in.) dome type (S-P520)
2.0 cm (3/4 in.) dome type (S-P520A/S-P520D)
Frequency Range ..... 48 to 20,000 Hz (S-P520)
44 to 20,000 Hz (S-P520A)
44 to 20,000 Hz (S-P520D)
Nominal Impedance ..... 8 Ω
Sensitivity ..... 87 dB/W at 1 m distance (S-P520)
88 dB/W at 1 m distance (S-P520A)
88 dB/W at 1 m distance (S-P520D)
Maximum Power ..... 40 W
Music Power (DIN) ..... 65 W (S-P520)
Dimensions ..... 180 (W) x 360 (H) x 206 (D) mm (S-P520)
180 (W) x 360 (H) x 270 (D) mm
7-1/16 (W) x 14-3/16 (H) x 10-5/8 (D) in. (S-P520A)
180 (W) x 360 (H) x 230 (D) mm (S-P520D)
Weight ..... 3.5 kg (7 lb 11 oz) (S-P520)
4.5 kg (9 lb 15 oz) (S-P520A)
4.0 kg (8 lb 13 oz) (S-P520D)

Accessories

Remote Control Unit 1
Dry Cell Batteries (AAA/R03-UM4) 2
FM T-type Antenna 1
AM Loop Antenna 1
Speaker Cords (Except for U.K. model) 2
Operating Instructions 1

NOTE:

Specifications and design subject to possible modification without notice due to improvements.

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PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS (USA) INC. 2265 East 220th Street, Long Beach, California 90810, U.S.A.
P.O. BOX 1720, Long Beach, California 90801, U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3, Canada
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium, TEL: 03/750.05.11
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia, TEL: (03) 580-9911

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